Work Order Bid (ID)

CAC Housing Energy Services

CAC Housing &
Energy Services

WORK ORDER INFORMATION

Work Order Name: WO/80008KN1838/1
Work Order Type: Weatherization
Audit Name: 80008KN1838-audit

CLIENT INFORMATION

Client ID: 80008KN1838

AGENCY INFORMATION

Agency: Knoxville- Knox County Community Action Agency
Address: (PO Box 51650) 2247 Western Avenue
Knoxville, TN 37950-1650

Agency Phone: (865) 244-3080
Fax: (865) 544-1647
Email Address:

Agency Contact: Neely, Richard

Work Phone: (865) 244-3080
Cell Phone:
Email Address: richard.neely@cachousing.org

Company Name & License Number: _____

Contractor's Signature: _____

COMMENT

`Comments
Single Family Dwelling
Contractor to follow 2006 International Residential Code as adopted by the City of Knoxville or Knox County as applicable.
City-House age is 1935
RRP Certified Firm/Renovator Required

Measures

Measure 1 **Seal & Repair Duct (reconnect supply going to kitchen boot)** ***Components*** ***Inspected***

Comment , Must be secured with straps to alleviate sagging, and must be pulled tight so that inner liner is fully stretched out.

Must be attached with zip tie and then taped with appropriate UL 181 tape. No changes allowed. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

					Estimated			Actual	
#	Material / Labor	Description / Comment	Units	Qty	Unit Cost	Total	Qty	Unit Cost	Total
		labor	Each	1					
10	Unspecified	Seal & Repair Duct (+)	Each	1					

Other Detail

Measure Sub Total: ***Sub Total:***

Field Notes:

Measure 2 **Infiltration Redctn**	***Components***	***Inspected***

Comment Energy Measures

Air Sealing Measures
Reduce air infiltration with 81 air seals. Each air seal is equal to 100 cfms. It is the responsibility of the contractor to find the air leaks. This is best performed with a Blower Door. Contractor must meet or exceed the targeted #. A house must not be brought below 1500 cfm @ 50 pascals. No CHANGE ORDER for air seals below the targeted #.
"Open" Ring, Front Door, Pre 13659 CFM @ 50 pascals. Target is 5559 CFM @ 50 Pa

wall repair in kitchen 1 sq ft
Wall repair should include all materials, paint, and labor. The wall must conform to the existing walls
likeness. (Paint to be applied on disturbed areas only, matches as close as possible).
Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

Glaze w1,w2
All loose glazing must be 100% removed. Push points installed as needed. New glazing should be even,
smooth, and all look uniform. Refer to Appendix A- Standards for Weatherization Materials and
Tennessee Weatherization Field Guide.NOTE: Silicone, caulk, or any other product that is not window glazing is not
acceptable.

Attic Access
Cut in the ceiling an attic access door 22" x 30". If unable to achieve, then opening must be equal to 660
square inches 22" x 30". An attic access door is installed as a complete unit. A door is inclusive of foam
seal, trim, paint (1st quality semi gloss color to be chosen by homeowner, caulk, and R-30 Batt
insulation. Build an insulation dam around the attic access hatch. Insulate the hatch to R-30 value. Build the dam
with rigid materials like plywood or oriented strand board so the dam supports the weight of the person entering
or leaving the attic. Weatherstrip the attic access to air seal the access and provide uninterrupted air barrier
between the attic and conditioned space. It is the best practice to seal hatches in the unconditioned space such as
carports and attached garages and stairwells. All attic hatches must have a locking device that securely hold the
access in place and slightly compresses the weatherstripping.. Do not cut the framing member to install a hatch
without approval from a local agency, a structural engineer, and local codes enforcement if applicable. The
dam's purpose is to prevent loose-fill insulation from falling out of the attic

hatch when opened. Install latches,
sash locks, gate hooks or other positive closure to provide substantially airtight hatch closure. No changes allowed
. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

Mastic 8 supply
Liquid white Mastic to be applied to entire inside of boot to seal all seams. Top of boot where it meets ceiling, wall
or subfloor to be caulked or foamed. Boots to be insulated on outside of boot to R-8. This is
best performed with 2-part close cell foam. No changes allowed. Refer to Appendix A- Standards for
Weatherization Materials and Tennessee Weatherization Field Guide.
NOTE:When post audit is performed, all boots must be below 1 pascal with none over 3 pascals and not
more than 3 boots over 1 pascal but less than 3 pascals.

Living RoomSupply4.6
Living Room12
Bdrm13.6
Bath14
Bdrm24.3
Dining Room5.6
Kitchen22.3
Family Room8

mastic return
Liquid white Mastic to be applied to entire inside of return to seal all seams. Use foam board around
edges to fill in any voids and mastic. Seal front of return box where it meets return register with
appropriate caulk. No changes allowed. Refer to Appendix A- Standards for Weatherization Materials
and Tennessee Weatherization Field Guide.

Broken pane w2,s1(2)
. Refer to Appendix A- Standards for Weatherization Materials
and Tennessee Weatherization Field Guide.

Weatherstrip d1,d2
Remove old weatherstripping before installing new weatherstripping. Weatherstrips must be one solid
piece. Refer to Appendix A- Standards for Weatherization Materials and Southeast Field Guide.

Sweep d1,d2
Remove old door sweep before installing new door sweep. Door Sweep must be one solid piece. Refer
to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.
NOTE: Rubber Door Bottom for Prehung Metal Door.

#	Material / Labor	Description / Comment	Units	Estimated Qty	Estimated Unit Cost	Estimated Total	Actual Qty	Actual Unit Cost	Actual Total
1	Miscellaneous Su	wall repair	SqFt	1					
1	Labor	labor	SqFt	1					
2	Windows	glaze	Each	2					
2	Labor	labor	Each	2					
3	Other	Attic Access	Each	1					
3	Labor	labor	Each	1					
4	Labor	labor	Each	8					
4	Heating Equipmen	mastic supply boot	Each	8					
5	Heating Equipmen	mastic return box	Each	1					
5	Labor	labor	Each	1					
6	Windows	broken pane	Each	3					
6	Labor	labor	Each	3					
7	Doors	weatherstrip	Each	2					
7	Labor	labor	Each	2					
8	Doors	sweep	Each	2					
8	Labor	labor	Each	2					

Other Detail

Measure Sub Total: ***Sub Total:***

Field Notes:

Measure 3 **Lighting Retrofits** **Components** I1,I2,I3,I4,I5 **Inspected** ☐

Comment

Lighting
Replace incandescent light bulb with compact fluorescent bulb equal to the incandescent. Inform customers about proper recycling of fluorescent bulbs by stores, municipal waste departments, or other recycling organizations. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

					Estimated			Actual		
#	Material / Labor	Description / Comment	Units	Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Lighting	Compact Fl. - 18 Watt	Each Lamp	2					
2	Labor	Compact Fl. - 18 Watt	Each Lamp	2					
3	Lighting	Compact Fl. - 18 Watt	Each Lamp	1					
4	Labor	Compact Fl. - 18 Watt	Each Lamp	1					
5	Lighting	Compact Fl. - 18 Watt	Each Lamp	3					
6	Labor	Compact Fl. - 18 Watt	Each Lamp	3					
7	Lighting	Compact Fl. - 18 Watt	Each Lamp	2					
8	Labor	Compact Fl. - 18 Watt	Each Lamp	2					
9	Lighting	Compact Fl. - 18 Watt	Each Lamp	1					
10	Labor	Compact Fl. - 18 Watt	Each Lamp	1					

Other Detail

Measure Sub Total: **Sub Total:**

Field Notes:

Measure 4 Duct Insulation | **Components** | **Inspected** ☐

Comment Duct Insulation/Return
Insulation must be a minimum of R-8. Must be taped with the appropriate tape (taped with UL 181). Install liquid mastic to all seams before insulating.
No changes allowed.
Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

				Estimated			Actual		
#	Material / Labor	Description / Comment	Units	Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Insulation	Duct Insulation	SqFt	20					
2	Labor	Duct Insulation	SqFt	20					

Other Detail

Measure Sub Total: | **Sub Total:**

Field Notes:

Measure 5 Floor Ins. R-19 **Components** f1 **Inspected** ☐

Comment

Floor Insulation
Includes labor cost. Contractor's responsibility to seal penetration in floor before installing insulation. Contractor to install using Resnet Grade 1 Standards. Insulation faced or unfaced is installed to maintain permanent contact with the subfloor above (paper side against subfloor) including necessary supports (e.g. staves for blankets). Insulation to have NO gaps, voids, or compressions. ✓ Install R19 insulation between floor joists. ✓ Insulation should be installed snugly against the floor and without voids or gaps. ✓ Insulation should fit snugly around cross bracing and other obstructions. ✓ securely fasten batt insulation to framing with insulation hangers, plastic mesh, or other supporting material. Insulation should contact subfloor to prevent convecting air above the insulation from reducing its R-value. ✓ Faced insulation should be installed with the foil or kraft facing placed up towards the floor sheathing. The batt should fill the whole cavity If insulation is supported by lath or plastic twine underneath. For batts that do not feel the whole cavity , use wire insulation supports .It is important that ground moisture barrier is properly installed in the crawlspace to protect the insulation and ensure proper R-value is achieved. Floor insulation should fit tightly against the rim joist. ✓ If balloon framed, air seal stud cavities prior to installing floor insulation. Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide. The addition of insulation in an existing home is a common weatherization measure. Whenever there is installation of any type of floor, wall, or attic insulation, the Contractor must provide a certificate. This certificate is referred to as a "receipt" in the Federal Trade Commission's (FTC) guidance. This will be effective with any job posted August 15th or later.

This certificate should be given to the Client and/or Owner of the property. In addition, a copy of the certificate must be posted at the property and a copy of the certificate must be inserted in the Client's file and retained at the Agency.

Points to remember about the Insulation Certificate:

•The copied certificate posted at the property should be secured to a rafter, stud, or joist. It must be in plain view and placed close to an opening of the crawl space or attic for accessibility.

•For wall insulation a certificate should be secured on a wall in the attic if possible.

•A certificate can combine areas where insulation was installed as long as the certificate reflects all information for each area.

•For roll insulation the certificate must clearly show all the coverage area(s) where the insulation was installed, thickness of the insulation, and the R-value of the insulation installed. The certificate must be dated and signed by the Insulation Contractor.

•For loose-fill insulation, the certificate must be dated and signed by the

Contractor, show all the coverage area(s), initial installed thickness, minimum settled thickness, R-value, and the number of bags used.

•Although this insulation has not been approved by DOE for insulating use in the WAP, per the FTC, spray foam insulation certificate must be signed and dated by the Contractor, show all the coverage area(s) of the insulation and the R-value of the insulation installed.

•For aluminum foil, the receipt must show all the coverage area(s), the number and thickness of the air spaces, the direction of heat flow, and the R-value.

When providing the insulation certificate, Contractors who install insulation must comply with federal regulation 460.17.

§ 460.17 What installers must tell their customers.

If you are an installer, you must give your customers a contract or receipt for the insulation you install. For all insulation except loose-fill and aluminum foil, the receipt must show the coverage area, thickness, and R-value of the insulation you installed. The receipt must be dated and signed by the installer. To figure out the R-value of the insulation, use the data that the manufacturer gives you. If you put insulation in more than one part of the house, put the data for each part on the receipt. You can do this on one receipt, as long as you do not add up the coverage areas or R-values for different parts of the house. Do not multiply the R-value for one inch by the number of inches you installed. For loose-fill, the receipt must show the coverage area, initial installed thickness, minimum settled thickness, R-value, and the number of bags used. For aluminum foil, the receipt must show the number and thickness of the air spaces, the direction of heat flow, and the R-value.

				Estimated			Actual		
#	Material / Labor	Description / Comment	Units	Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Insulation	Floor Insulation - Fiberglass Faced Batt - R-19	SqFt	1148					
2	Labor	Floor Insulation - Fiberglass Faced Batt - R-19	SqFt	1148					
Other Detail									

Measure Sub Total: Sub Total:

Field Notes:

Measure 6 **Storm Windows** **Components** w1,s1 **Inspected** ☐

Comment

Windows
Includes labor and material. Refer to House diagram for estimated measurements. Responsibility of contractor to verify measurements in the field before ordering window(s). Contractor to include the thermal break, caulking, framing, and any other related items to convey a completed measure. Storm Windows should be sized correctly and fit tightly in the opening. Caulk storm windows around the frame except for weep holes at the bottom that must not be sealed. If weep holes are not manufactuered into the storm they should be drilled. Don't allow storm windows to restrict or ventilation through movable windows .Choose windows that are openable from the inside or install pin on storm sashes that open along with the moveable primary window..Replacement windows must have a U-Factor less than or equal to U-0.35 as rated by the National Fenestration Rating Council or approved equal.

Refer to house diagram with window sizes. Responsibility of contractor to verify measurements in the
field before ordering window . Refer to Appendix A- Standards for Weatherization Materials
and Tennessee Weatherization Field Guide.

				Estimated			Actual		
#	Material / Labor	Description / Comment	Units	Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Windows	Storm Window	SqFt	15.47					
1	Other	Storm Window/labor	Each Window	2					

Other Detail

Measure Sub Total: **Sub Total:**

Field Notes:

Measure 7 **CO Monitor is Needed** **Components** **Inspected**

Comment Refer to Appendix A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

					Estimated			Actual	
#	Material / Labor	Description / Comment	Units	Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Health and Safety	CO monitor	Each	1					
2	Labor	Labor	Each	1					

Other Detail

Measure Sub Total: **Sub Total:**

Field Notes:

Measure 8 **Fix Improper Venting of Bathroom Exhaust Fan** | ***Components*** | ***Inspected***

Comment

Bath Vents installed to outside of home with appropriate roof fittings, sidewall fittings, or soffit fittings,Use rigid
galvanized steel, stainless steel, or copper vent pipe for bath exhaust vent pipe .Insulate the vent pipe with R-8
to prevent condensation. Bathroom vent pipe must be securely fastened and sealed to prevent movement. Avoid
using flexible plastic or aluminum duct because these restrict airflow. No changes allowed. Refer to Appendix A-
Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

					Estimated			Actual	
#	Material / Labor	Description / Comment	Units	Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Health and Safety	Bath Vent w/ Piping to Outside	Each	1					
2	Labor	Labor	Each	1					

Other Detail

Measure Sub Total: ***Sub Total:***

Field Notes:

Measure 9 **Install Bathroom Exhaust Fan** ***Components*** ***Inspected***

Comment

Bath Exhaust fan equal to Nutone Model # 769RFT. Must be energy star or Title 24 compliant. Must have
weatherproof termination fitting, a Back draft damper installed at the fan housing or termination fitting have a
efficacy of 2.8 and a low noise rating depending on the CFM output of the fan installed To include All electrical.
Refer to Attachment A- Standards for Weatherization Materials and Tennessee Weatherization Field Guide.

					Estimated			Actual		
#	Material / Labor	Description / Comment	Units	Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Health and Safety	Bathroom exhaust fan	Each	1					
2	Labor	Labor	Each	1					

Other Detail

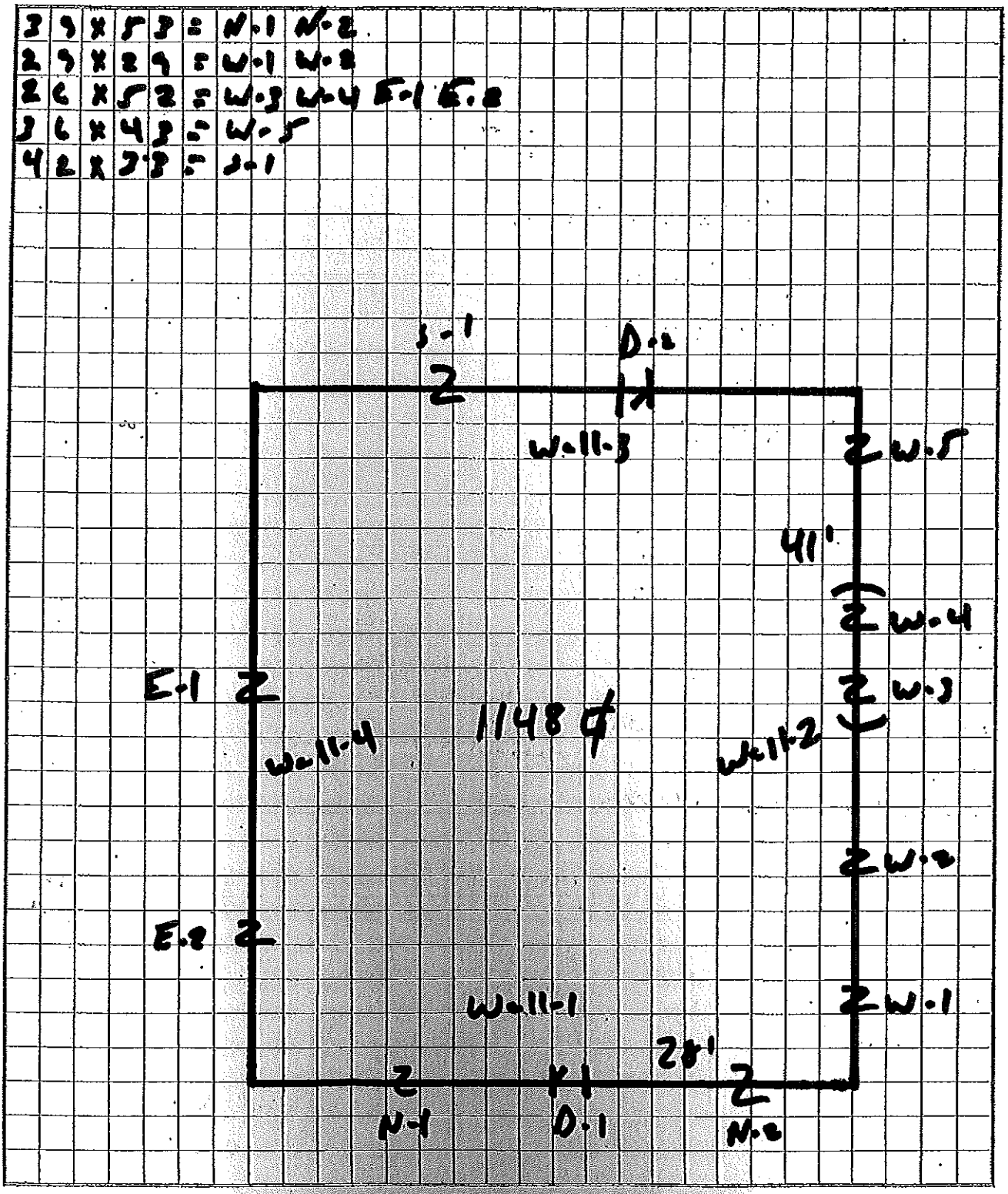
Measure Sub Total: ***Sub Total:***

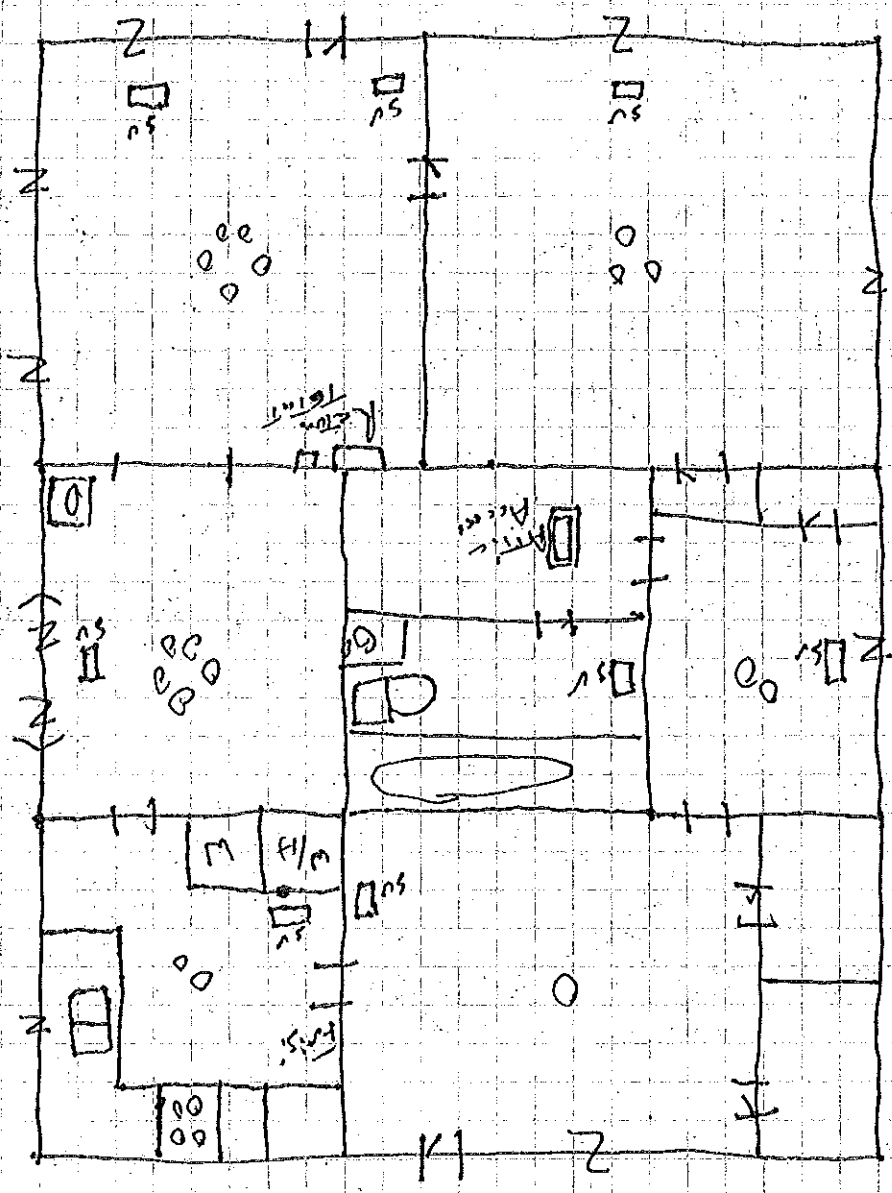
Field Notes:

Work Order Grand Total: ***Grand Total:***

Site Diagram

1838





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